



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/085,743 | 02/26/2002 | John Stanley Michalek | 9539-000055 | 8433 |

27572 7590 08/29/2003

HARNES, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

AURORA, REENA

ART UNIT PAPER NUMBER

2862

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,743

Applicant(s)

MICHALEK ET AL.

Examiner

Reena Aurora

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Dobbs et al. (6,549,001).

3. As to claim 1, Dobbs discloses a unitized tone ring assembly including an axle assembly (12); a plurality of sensor (14) adapted to send signals to a controller adapted to determine the rotational parameters of an axle within the axle assembly; and an exciter assembly (10) including an exciter ring (18) coupled to rotate with the axle (50), the exciter ring (18) having an annular lip (22) protruding about the circumference of a first end of the ring, the ring having an aperture to accommodate the shaft of the axle (50), the ring having teeth (32, 34) extending axially along a second end of the ring, the sensor positioned to detect the teeth of the exciter ring; and an outer member concentric to the lip (22), adapted to restrain the radially projecting annular surfaces of either annular end of the lip, the outer member fixed within the axle assembly (12).

4. As to claim 6, Dobbs discloses a unitized tone ring assembly comprising an axle tube (12); an axle (50) passing through a section of the axle tube (12); an inner bore

Art Unit: 2862

(95) within the axle tube; a sensing means (14) for detecting rotational parameters of the axle (50); and an exciter ring (18) assembly press fit into the inner bore (95) comprising an exciter ring (18) with an annular lip (22) protruding about the circumference of a first end of the exciter ring (18) having a coaxial bore to accommodate the diameter of the axle (50), the exciter ring having axial teeth (32, 34) extending radially along a second end of the exciter ring, the sensing means positioned to detect the teeth of the exciter ring; and outer member concentric to the lip (22), adapted to restrain the radially projecting annular surfaces of either annular end of the lip, the outer member adapted to an interference fit with the inner bore (95) (Fig. 1, 2, 4 and 6).

5. As to claim 11, Dobbs discloses a unitized tone[✓] ring assembly comprising an exciter ring (18) with an annular lip (22) protruding about the circumference of a first end of the exciter ring, the exciter ring having radial teeth (32, 34) extending axially along a second end of the exciter ring, the lip (22) having a first radially projecting annular end surface and a second radially projecting annular end surface; and an outer member (101) concentric to the lip, the outer member (101) restraining the first and second annular surfaces of the lip (22), the outer member (101) adapted to be restrained relative to rotation of the axle (50) (Fig. 2 and 4).

6. As to claim 19, Dobbs discloses a unitized tone ring assembly comprising an annular lip (22) protruding about the circumference of a first end of the exciter ring (18), the exciter ring having a coaxial bore (95) to accommodate the diameter of an axle (50), the exciter ring having radial teeth (32, 34) extending axially along a second end of the

Art Unit: 2862

exciter ring, the lip (22) having a first annular end surface and a second annular end surface and an outer circumferential surface (Fig. 2 and 4).

7. As to claims 2, 7, 12, 20 and 21, Dobbs discloses an elastomer insert (38) attached to the interior surface of the exciter ring (10) and contacting the axle (50) to restrain the relative rotation between the exciter ring and the axle (Fig. 2, Column 4, Lines 30 - 40).

8. As to claims 3 - 5, 8 - 10, 13 - 18 and 22 - 27, Dobbs discloses the exciter ring (18) including a means for promoting oil flow within an axle tube (12) in the region of the exciter ring assembly including channels (46) within the interior surface of the elastomer insert (38) to enable oil to pass from a first axial end of the exciter ring assembly to a second axial end of the exciter ring assembly. (Column 7, Lines 15 - 27).

Prior Art of Record

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Keys (1,377,589) is cited for its disclosure of an axle construction.

11. Ghoneim (5,305,218) is cited for its disclosure of a vehicle handling control for wheel slip control systems.

12. Polinsky et al. (5,570,013) is cited for its disclosure of a speed sensor assembly having a fluid seal carrier and piloting cup.

13. Monroe et al. (5,603,554) is cited for its disclosure of a rear axle assembly.

Art Unit: 2862

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 703-605-1372. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 703-308-0750. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Reena Aurora



N. Le
Supervisory Patent Examiner
Technology Center 2800